

TEST REPORT

Reference No...... : WTX25X03051957W
FCC ID : 2BOGL-PT100MSR
Applicant : Merlos LLC
Address : 2106 Gardenia Drive, Houston, TX, 77018
Manufacturer : The same as Applicant
Address : The same as Applicant
Product Name : Pocket Tester Relay Board
Model No...... : PT-100-MSR
Standards : FCC Part 15.249
Date of Receipt sample : 2025-03-07
Date of Test..... : 2025-03-07 to 2025-08-11
Date of Issue : 2025-08-11
Test Report Form No. : WTX_Part 15_249W
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

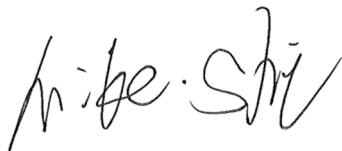
Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,
Block 70 Bao'an District, Shenzhen, Guangdong, China

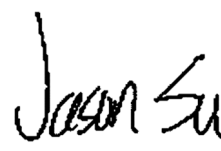
Tel.: +86-755-33663308 Fax.: +86-755-33663309 Email: sem@waltek.com.cn

Tested by:



Mike Shi/Project Engineer

Approved by:



Jason Su/Manager

TABLE OF CONTENTS

1. GENERAL INFORMATION	4
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
1.2 TEST STANDARDS.....	5
1.3 TEST METHODOLOGY	5
1.4 TEST FACILITY	5
1.5 EUT SETUP AND TEST MODE	6
1.6 MEASUREMENT UNCERTAINTY	7
1.7 TEST EQUIPMENT LIST AND DETAILS	8
2. SUMMARY OF TEST RESULTS.....	12
3. ANTENNA REQUIREMENTS	13
3.1 STANDARD APPLICABLE	13
3.2 TEST RESULT.....	13
4. RADIATED EMISSIONS	14
4.1 STANDARD APPLICABLE	14
4.2 TEST PROCEDURE	14
4.3 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	17
4.4 SUMMARY OF TEST RESULTS/PLOTS.....	17
5. OUT OF BAND EMISSIONS	25
5.1 STANDARD APPLICABLE	25
5.2 TEST PROCEDURE	25
5.3 SUMMARY OF TEST RESULTS/PLOTS.....	25
6. EMISSION BANDWIDTH.....	28
6.1 STANDARD APPLICABLE	28
6.2 TEST PROCEDURE	28
6.3 SUMMARY OF TEST RESULTS/PLOTS.....	28
7. CONDUCTED EMISSIONS	30
7.1 TEST PROCEDURE	30
7.2 BASIC TEST SETUP BLOCK DIAGRAM	30
7.3 TEST RECEIVER SETUP	30
7.4 SUMMARY OF TEST RESULTS/PLOTS.....	30
APPENDIX PHOTOGRAPHS.....	33

Report version

Version No.	Date of issue	Description
Rev.00	2025-08-11	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Pocket Tester Relay Board
Trade Name:	/
Model No.:	PT-100-MSR
Adding Model:	/
Rated Voltage:	Charging Port:DC15V
Battery capacity:	/
Power Adaptor:	MODEL:LY-01500200 INPUT:AC100-240V 50-60Hz OUTPUT:DC15V,2000mA
<i>Note: The test data is gathered from a production sample provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Frequency Range:	902.65MHz-927.35MHz
Max. Field Strength:	93.51dBuV/m
Modulation:	/
Quantity of Channels:	/
Channel Separation:	/
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
<i>Note The Antenna Gain is provided by the customer and can affect the validity of results.</i>	

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz.

ANSI C63.10-2020: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which results in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.

1.5 EUT Setup and Test Mode

The RF sample was used for the purpose of the measurements. All testing was performed under the maximum output power, and measured its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	Transmit	LCH:902.65MHz; MCH:915.1MHz; HCH:927.35MHz

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~75 %
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
DC Cable	1.1	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
/	/	/	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	0.57dB
Occupied Bandwidth	Conducted	0.015MHz
Conducted Spurious Emission	Conducted	2.17dB
Conducted Emissions	Conducted	9-150kHz, 3.74dB
		0.15-30MHz, 3.34dB
Transmitter Spurious Emissions	Radiated	30-200MHz, 4.52dB
		0.2-1GHz 5.56dB
		1-6GHz, 3.84dB
		6-18GHz, 3.92dB

1.7 Test Equipment List and Details

Fixed asset Number	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
WTXE1041A 1001	Communication Tester	Rohde & Schwarz	CMW500	148650	2025-02-23	2026-02-22
WTXE1005A 1005	Spectrum Analyzer	Agilent	N9020A	US471401 02	2025-02-23	2026-02-22
WTXE1084A 1001	Spectrum Analyzer	Agilent	N9020A	MY543205 48	2025-02-23	2026-02-22
WTXE1004A 1-001	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2025-02-23	2026-02-22
WTXE1103A 1003	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22
WTXE1003A 1-005	Coaxial Cable	/	0M4RFC	/	2025-02-23	2026-02-22
☐ Chamber A: Below 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/03 5	2025-02-23	2026-02-22
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2025-02-23	2026-02-22
WTXE1007A 1001	Amplifier	HP	8447F	2805A034 75	2025-02-23	2026-02-22
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2026-02-25
WTXE1010A 1006	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2025-02-23	2026-02-22
WTXE1104A 1032-1	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1032-2	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1032-3	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
☐ Chamber A: Above 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/03 5	2025-02-23	2026-02-22
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2025-02-23	2026-02-22
WTXE1065A 1001	Amplifier	C&D	PAP-1.0G18	14918	2025-02-23	2026-02-22
WTXE1010A 1005	Horn Antenna	ETS	3117	00086197	2025-02-23	2026-02-22

WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2026-03-16
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2025-02-23	2026-02-22
WTXE1104A 1033-1	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
WTXE1104A 1033-2	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
WTXE1104A 1033-3	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
☐ Chamber B:Below 1GHz						
WTXE1010A 1006	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2024-03-17	2027-03-16
WTXE1038A 1001	Amplifier	Agilent	8447D	2944A104 57	2025-02-23	2026-02-22
WTXE1001A 1002	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2025-02-23	2026-02-22
WTXE1104A 1031-1	Coaxial Cable	/	1.5MRFC-LWB3	/	2025-02-23	2026-02-22
WTXE1104A 1031-2	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
WTXE1104A 1031-3	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
☒ Chamber C:Below 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2025-02-23	2026-02-22
WTXE1010A 1013-1	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2024-04-18	2027-04-17
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2026-02-25
WTXE1007A 1002	Amplifier	HP	8447F	2944A038 69	2025-02-23	2026-02-22
WTXE1104A 1034-1	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1034-2	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1034-3	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
☒ Chamber C: Above 1GHz						
WTXE1093A	EMI Test	Rohde &	ESIB 26	100401	2025-02-23	2026-02-22

1001	Receiver	Schwarz				
WTXE1103A 1005	Horn Antenna	POAM	RTF-118A	1820	2023-03-10	2026-03-09
					2025-06-13	2027-06-12
WTXE1103A 1006	Amplifier	Tonscend	TAP01018050	AP22E806 235	2025-02-23	2026-02-22
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2026-03-16
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2025-02-23	2026-02-22
WTXE1104A 1035-1	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1035-2	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1035-3	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
☐ Conducted Room 1#						
WTXE1104A 1029	EMI Test Receiver	Rohde & Schwarz	ESCI	100525	2024-12-08	2025-12-07
WTXE1002A 1001	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2025-02-23	2026-02-22
WTXE1003A 1001	AC LISN	Schwarz beck	NSLK8126	8126-279	2025-02-23	2026-02-22
WTXE1104A 1036	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
WTXE1104A 1038	Coaxial Cable	/	6MRFC-DP	/	2025-02-23	2026-02-22
☒ Conducted Room 2#						
WTXE1001A 1004	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2025-02-23	2026-02-22
WTXE1003A 1003	LISN	Rohde & Schwarz	ENV 216	100097	2025-02-23	2026-02-22
WTXE1104A 1037	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission A)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission B)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission C)	Farad	EZ-EMC	RA-03A1-2 (1.1.4.2)
EMI Test Software (Conducted Emission Room 1#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3
EMI Test Software (Conducted Emission Room 2#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3

*Remark: indicates software version used in the compliance certification testing.

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§15.203	Antenna Requirement	Compliant
§15.205	Restricted Band of Operation	Compliant
§15.207(a)	Conducted Emission	Compliant
§15.209(a)(f)	Radiated Spurious Emissions	Compliant
§15.249(a)	Field Strength of Emissions	Compliant
§15.249(d)	Out of Band Emission	Compliant
§15.215(c)	Emission Bandwidth	Compliant

N/A: Not applicable.

3. Antenna Requirements

3.1 Standard Applicable

According to FCC Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.2 Test Result

This product has a PCB antenna, fulfill the requirement of this section.

4. Radiated Emissions

4.1 Standard Applicable

According to §15.249(a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Field strength of fundamental (milli-volts/meter)	Field strength of Harmonics (micro-volts/meter)
902-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

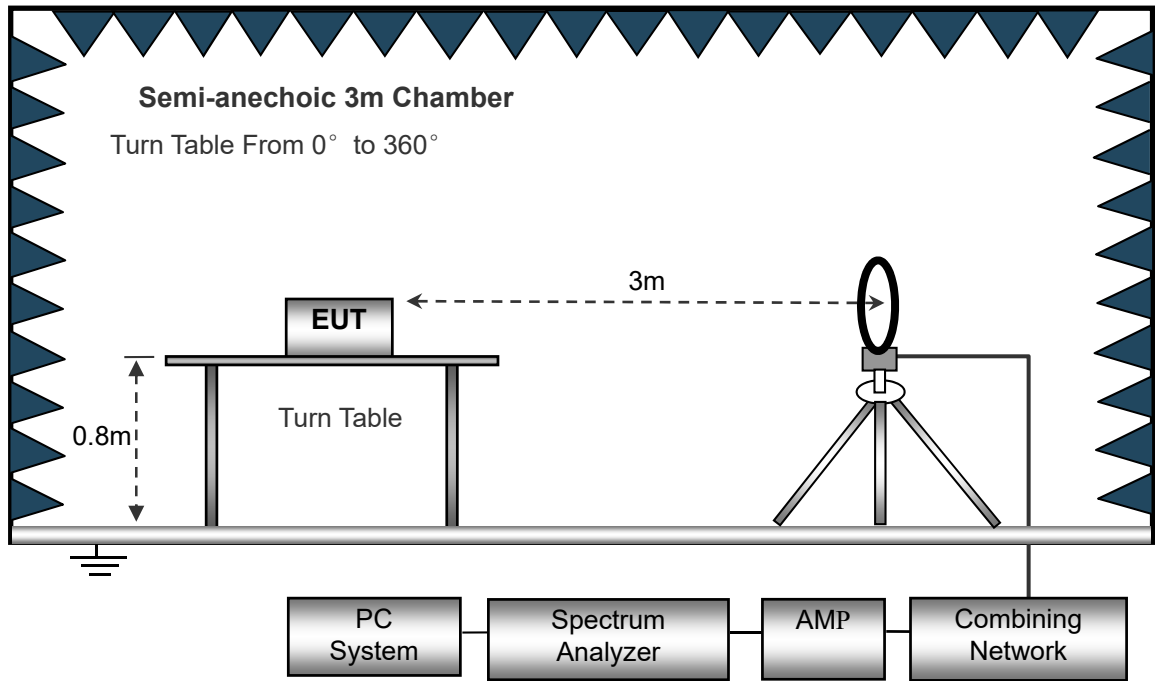
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

4.2 Test Procedure

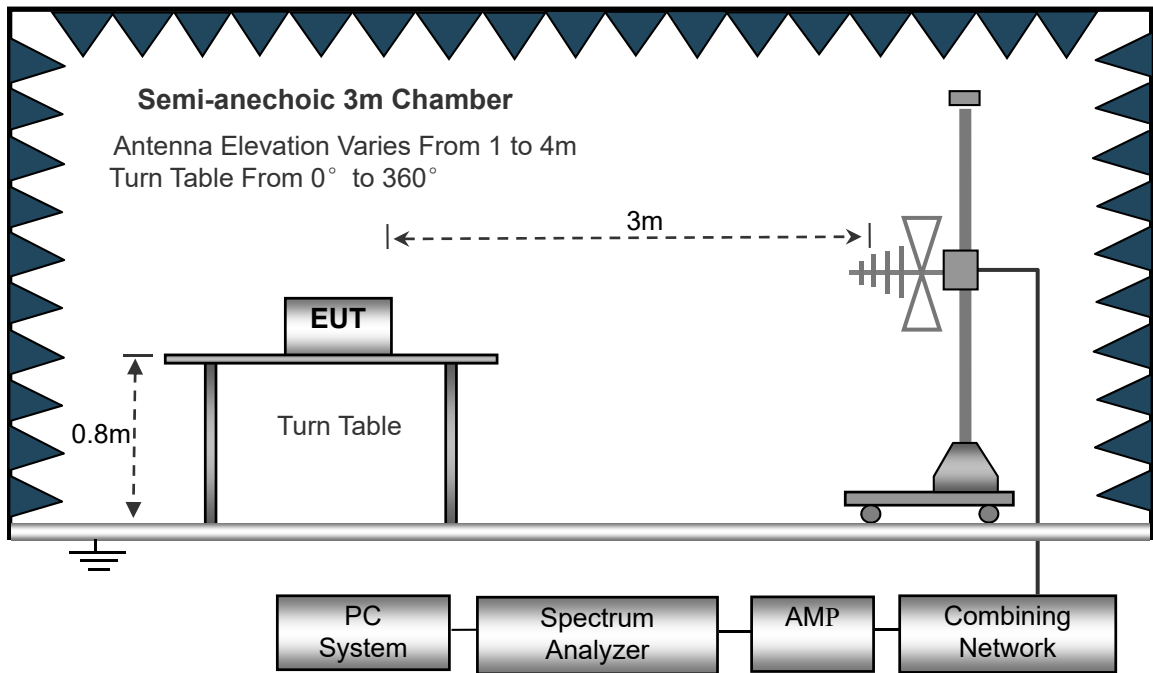
The setup of EUT is according with per ANSI C63.10-2020 measurement procedure. The specification used was with the FCC Part 15.205 15.249(a) and FCC Part 15.209 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

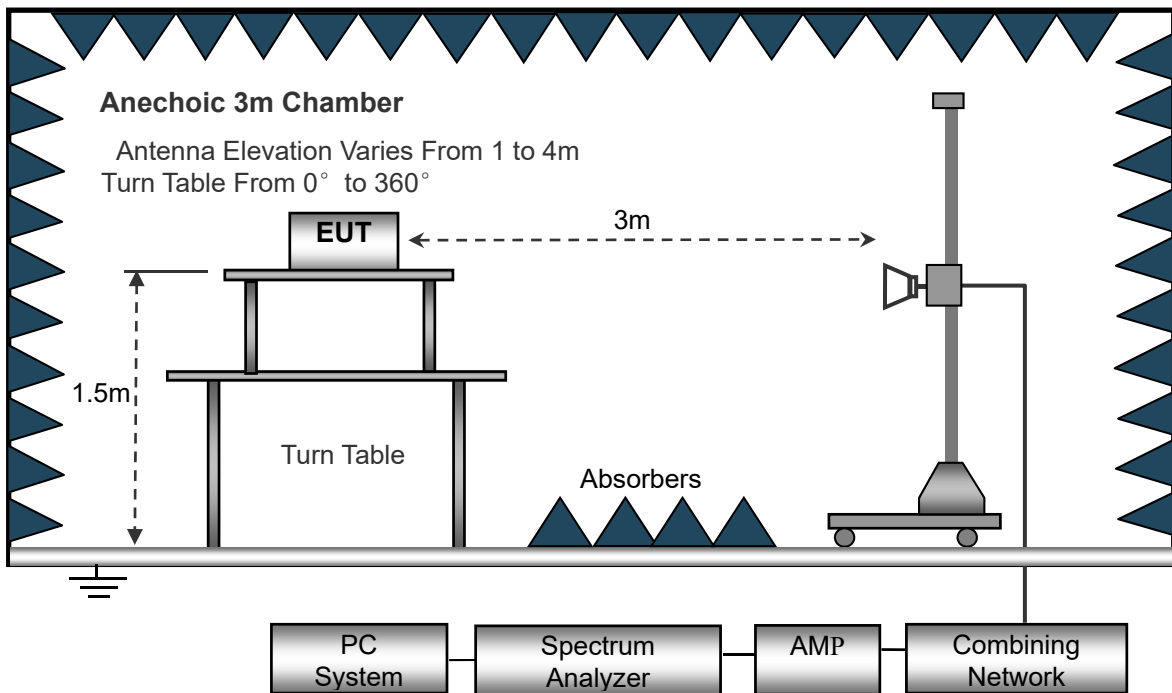
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30MHz to 1GHz.



The test setup for emission measurement above 1GHz.



Frequency :9kHz-30MHz
 RBW=10kHz,
 VBW =30kHz
 Sweep time= Auto
 Trace = max hold
 Detector function = peak

Frequency :30MHz-1GHz
 RBW=120kHz,
 VBW=300kHz
 Sweep time= Auto
 Trace = max hold
 Detector function = peak, QP

Frequency :Above 1GHz
 RBW=1MHz,
 VBW=3MHz(Peak), 10Hz(AV)
 Sweep time= Auto
 Trace = max hold
 Detector function = peak, AV

4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit. The equation for margin calculation is as follows:

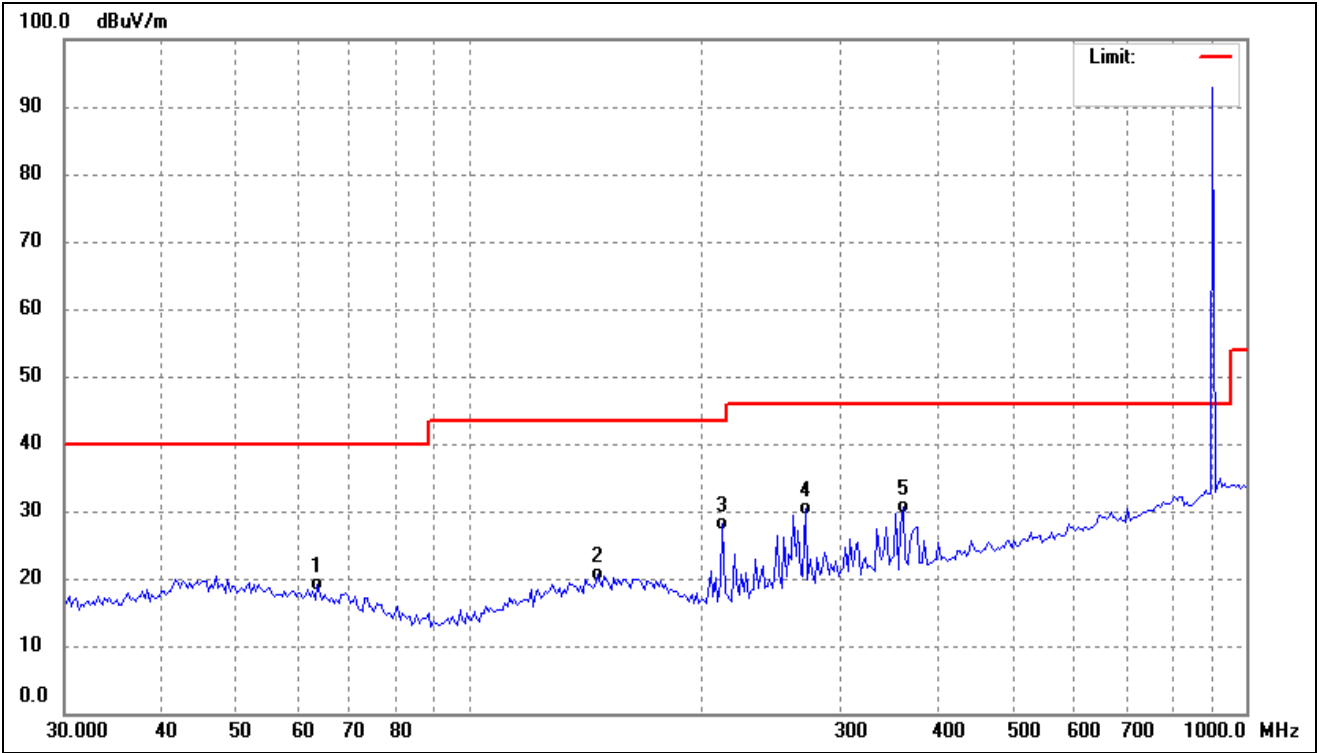
$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15C Limit}$$

4.4 Summary of Test Results/Plots

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

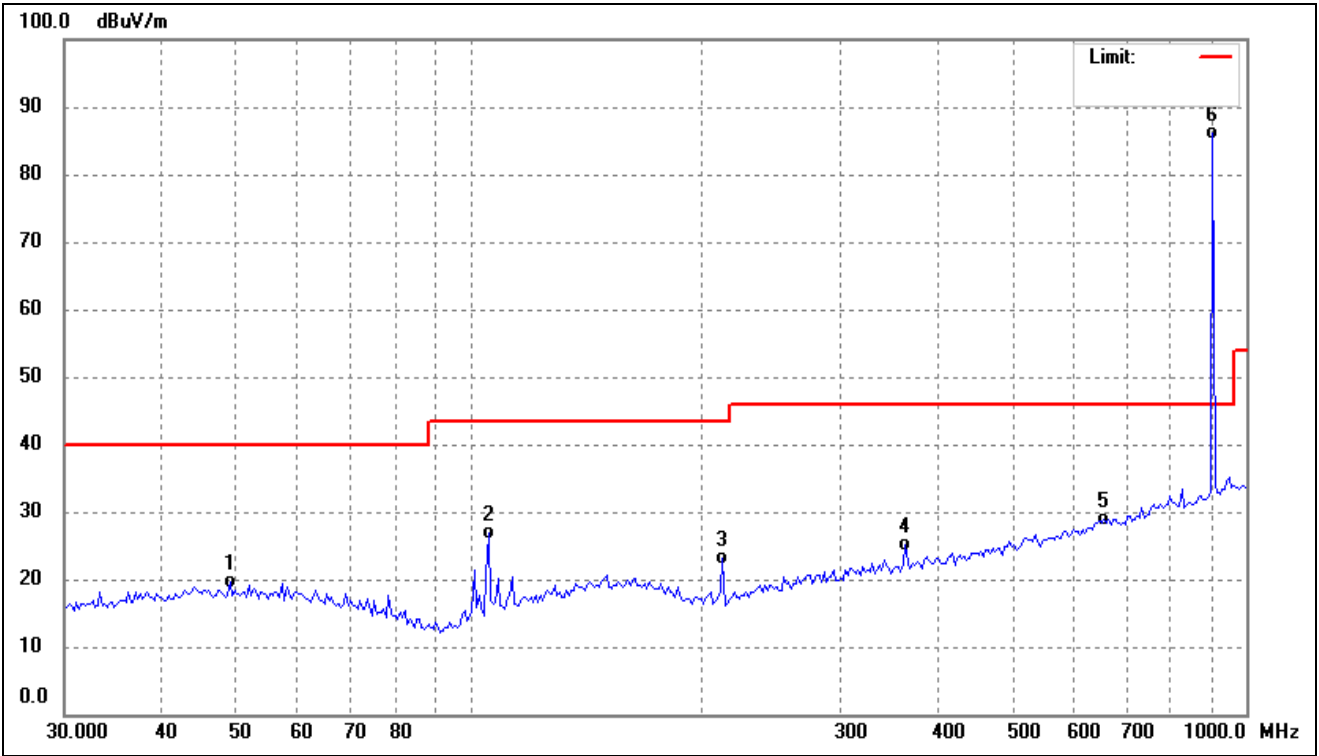
➤ Spurious Emissions Below 1GHz

Test Channel	Low	Polarity:	Horizontal
--------------	-----	-----------	------------



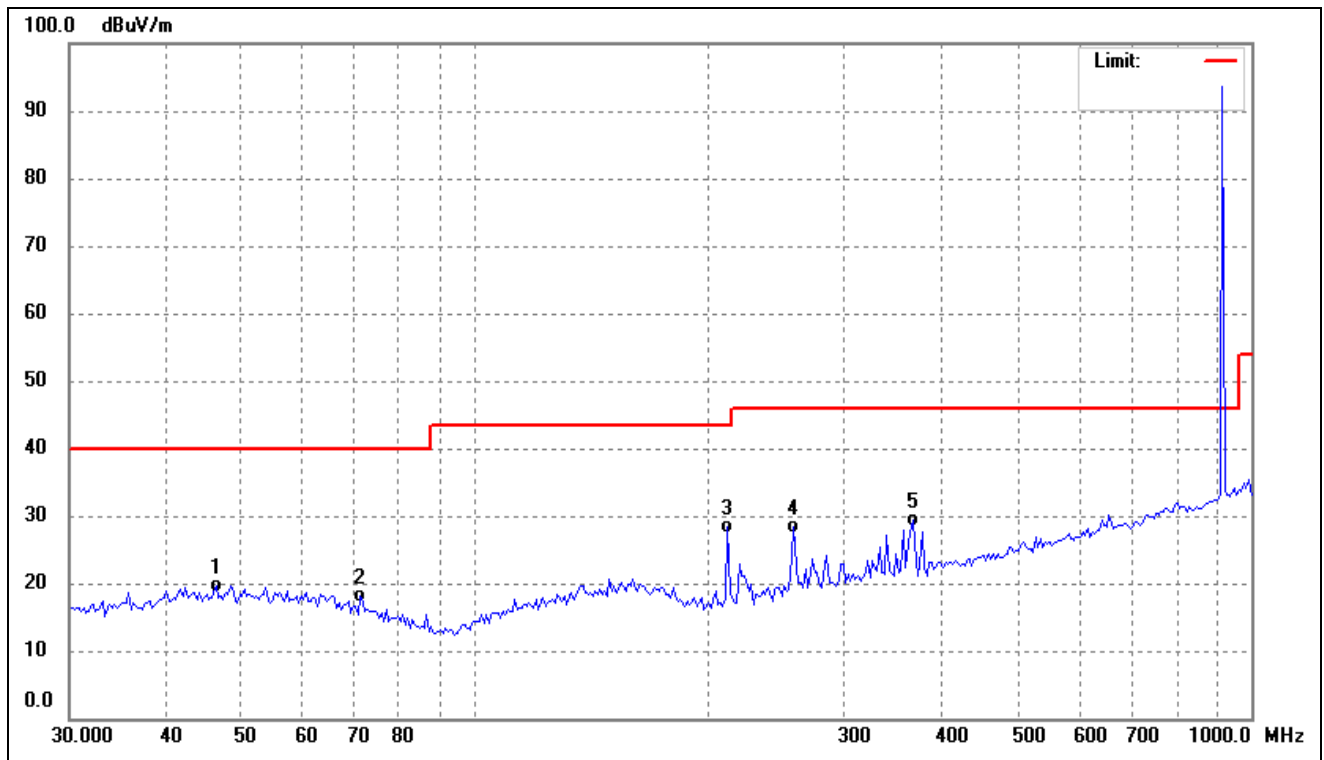
No.	Frequency (MHz)	Reading (dBuV/m)	Corr. dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (°)	Height (cm)	Remark
1	63.6312	29.28	-10.03	19.25	40.00	-20.75	-	-	peak
2	145.8109	29.69	-9.10	20.59	43.50	-22.91	-	-	peak
3	211.6112	39.94	-11.69	28.25	43.50	-15.25	-	-	peak
4	270.6162	39.24	-8.77	30.47	46.00	-15.53	-	-	peak
5	360.9775	37.48	-6.84	30.64	46.00	-15.36	-	-	peak
6	906.3041	90.74	2.08	92.82	94.00	-1.18	-	-	Fundamental

Test Channel	Low	Polarity:	Vertical
--------------	-----	-----------	----------



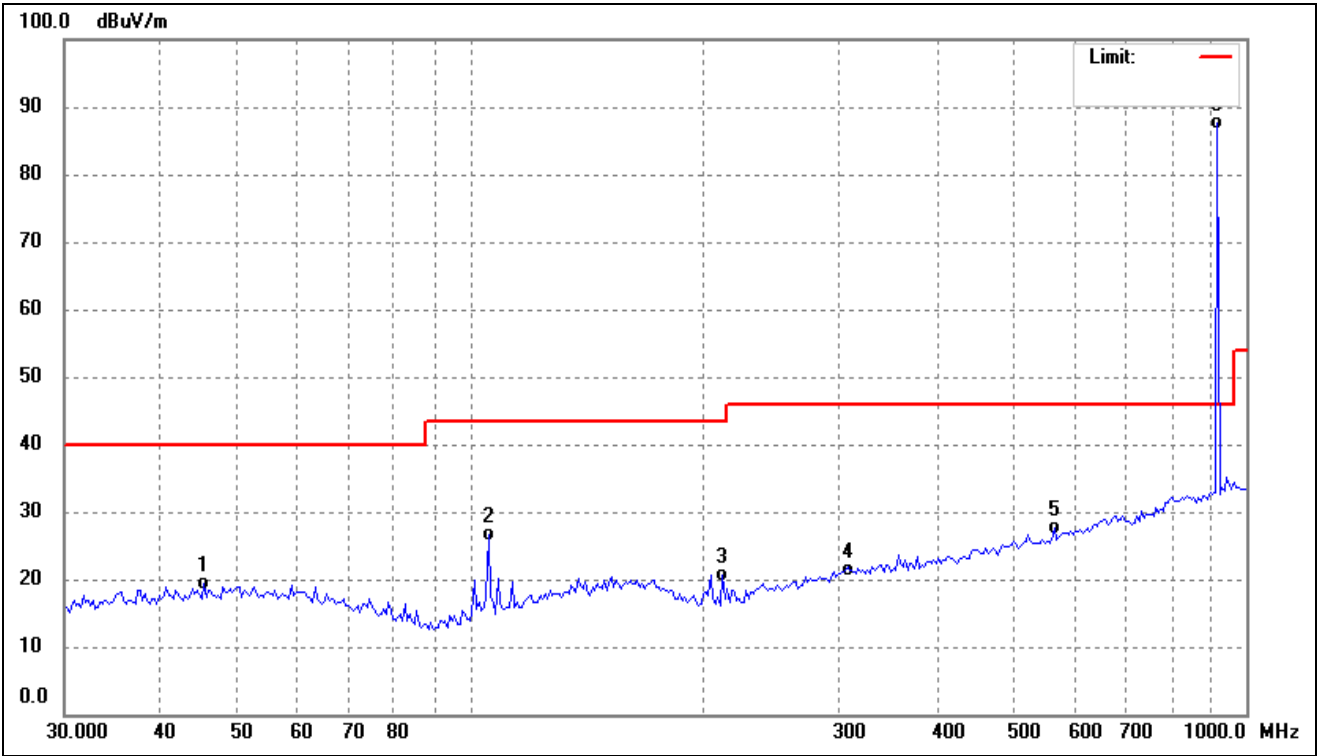
No.	Frequency (MHz)	Reading (dBuV/m)	Corr. dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (°)	Height (cm)	Remark
1	49.0627	28.52	-9.00	19.52	40.00	-20.48	-	-	peak
2	105.5369	39.45	-12.66	26.79	43.50	-16.71	-	-	peak
3	211.6112	34.84	-11.69	23.15	43.50	-20.35	-	-	peak
4	363.5231	31.88	-6.79	25.09	46.00	-20.91	-	-	peak
5	655.9766	30.18	-1.30	28.88	46.00	-17.12	-	-	peak
6	906.3041	84.06	2.08	86.14	94.00	-7.86	-	-	Fundamental

Test Channel	Middle	Polarity:	Horizontal
--------------	--------	-----------	------------



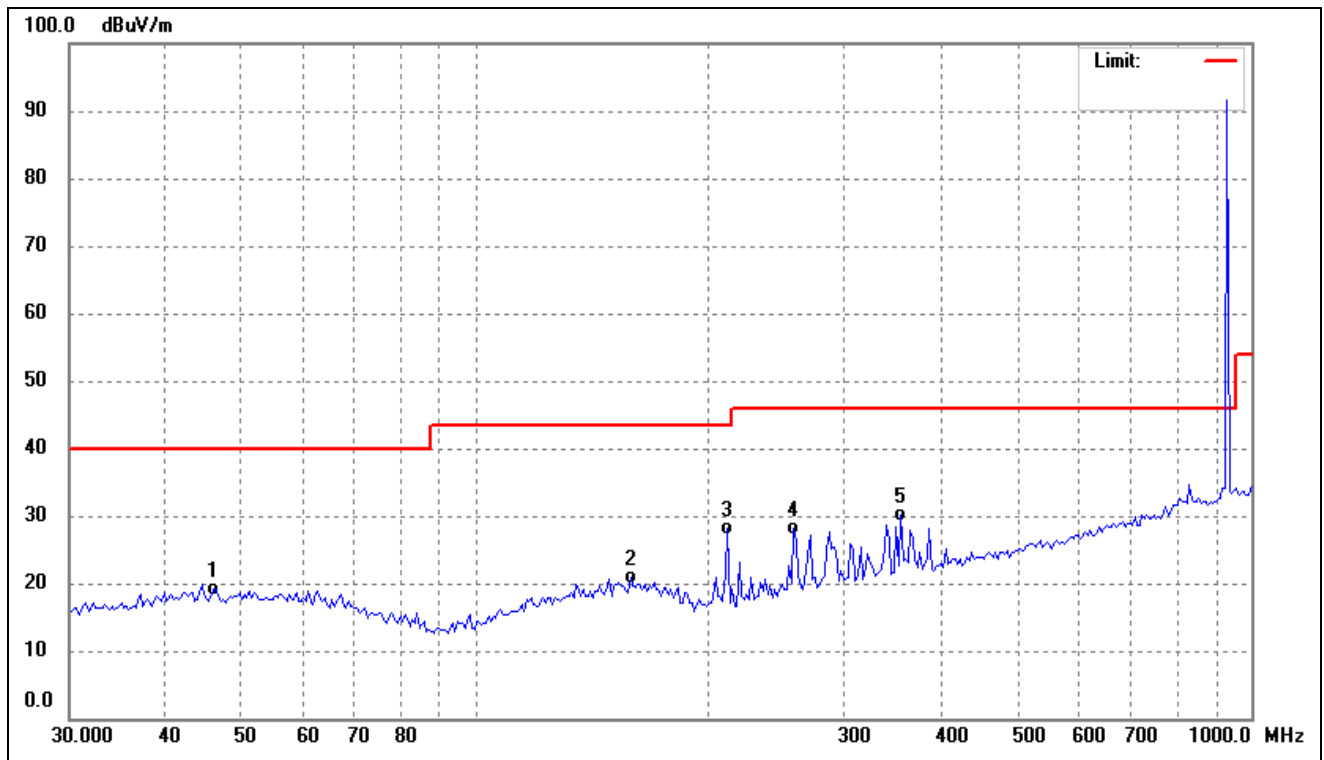
No.	Frequency (MHz)	Reading (dBuV/m)	Corr. dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (°)	Height (cm)	Remark
1	46.3806	28.73	-9.02	19.71	40.00	-20.29	-	-	peak
2	71.2033	29.41	-11.34	18.07	40.00	-21.93	-	-	peak
3	211.6112	40.13	-11.69	28.44	43.50	-15.06	-	-	peak
4	257.6266	37.70	-9.34	28.36	46.00	-17.64	-	-	peak
5	366.0866	36.08	-6.75	29.33	46.00	-16.67	-	-	peak
6	919.1315	91.18	2.33	93.51	94.00	-0.49	-	-	Fundamental

Test Channel	Middle	Polarity:	Vertical
--------------	--------	-----------	----------



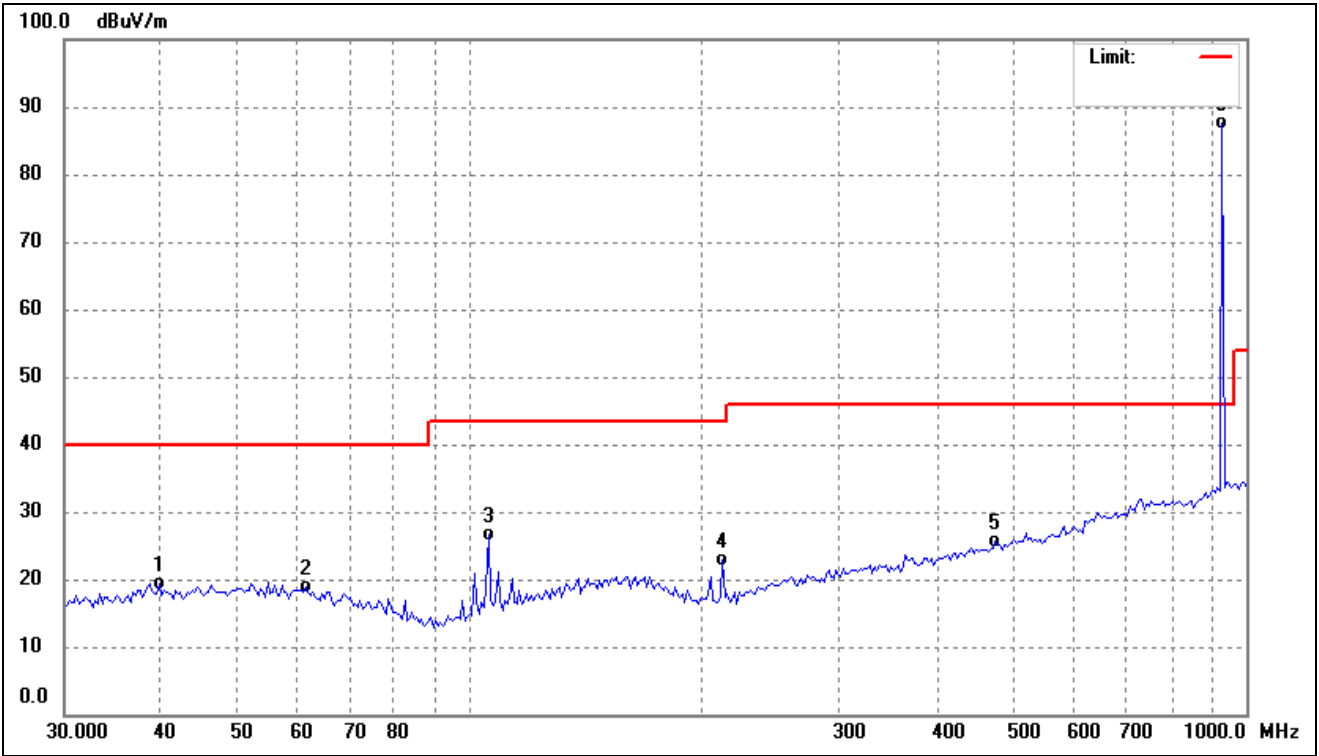
No.	Frequency (MHz)	Reading (dBuV/m)	Corr. dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (°)	Height (cm)	Remark
1	45.4131	28.37	-9.05	19.32	40.00	-20.68	-	-	peak
2	105.5369	39.36	-12.66	26.70	43.50	-16.80	-	-	peak
3	211.6112	32.38	-11.69	20.69	43.50	-22.81	-	-	peak
4	304.9548	29.05	-7.65	21.40	46.00	-24.60	-	-	peak
5	565.9776	30.91	-3.20	27.71	46.00	-18.29	-	-	peak
6	919.1315	85.37	2.33	87.70	94.00	-6.30	-	-	Fundamental

Test Channel	High	Polarity:	Horizontal
--------------	------	-----------	------------



No.	Frequency (MHz)	Reading (dBuV/m)	Corr. dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (°)	Height (cm)	Remark
1	46.0558	28.28	-9.03	19.25	40.00	-20.75	-	-	peak
2	158.6399	29.33	-8.56	20.77	43.50	-22.73	-	-	peak
3	211.6112	39.86	-11.69	28.17	43.50	-15.33	-	-	peak
4	257.6266	37.35	-9.34	28.01	46.00	-17.99	-	-	peak
5	353.4472	37.03	-6.97	30.06	46.00	-15.94	-	-	peak
6	932.1405	89.99	2.59	92.58	94.00	-1.42	-	-	Fundamental

Test Channel	High	Polarity:	Vertical
--------------	------	-----------	----------



No.	Frequency (MHz)	Reading (dBuV/m)	Corr. dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (°)	Height (cm)	Remark
1	39.7371	29.05	-9.61	19.44	40.00	-20.56	-	-	peak
2	61.4343	28.70	-9.74	18.96	40.00	-21.04	-	-	peak
3	105.5369	39.41	-12.66	26.75	43.50	-16.75	-	-	peak
4	211.6112	34.59	-11.69	22.90	43.50	-20.60	-	-	peak
5	474.7913	30.46	-4.86	25.60	46.00	-20.40	-	-	peak
6	932.1405	84.99	2.59	87.58	94.00	-6.42	-	-	Fundamental

Remark: ‘-’Means’ the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

➤ Spurious Emissions Above 1GHz

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-902.65MHz							
1571.784	56.99	-22.38	34.61	74.00	-39.39	H	PK
2232.016	56.38	-19.68	36.70	74.00	-37.30	H	PK
3673.925	56.28	-14.73	41.55	74.00	-32.45	H	PK
1331.216	56.06	-23.20	32.86	74.00	-41.14	V	PK
2876.854	56.08	-18.14	37.94	74.00	-36.06	V	PK
5991.770	55.41	-9.12	46.29	74.00	-27.71	V	PK
Middle Channel-915.1MHz							
1979.672	55.66	-20.33	35.33	74.00	-38.67	H	PK
2539.859	55.05	-18.95	36.10	74.00	-37.90	H	PK
5855.110	53.72	-9.46	44.26	74.00	-29.74	H	PK
2082.751	56.84	-20.04	36.80	74.00	-37.20	V	PK
3540.774	56.50	-14.55	41.95	74.00	-32.05	V	PK
6188.468	53.94	-8.89	45.05	74.00	-28.95	V	PK
High Channel-927.35MHz							
1500.903	55.56	-22.77	32.79	74.00	-41.21	H	PK
3319.266	55.50	-15.70	39.80	74.00	-34.20	H	PK
7173.175	53.93	-6.75	47.18	74.00	-26.82	H	PK
1487.115	55.03	-22.81	32.22	74.00	-41.78	V	PK
3444.087	55.31	-14.86	40.45	74.00	-33.55	V	PK
6131.619	53.88	-8.95	44.93	74.00	-29.07	V	PK

*Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 3th Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
The measurements greater than 20dB below the limit from 9kHz to 30MHz.*

5. Out of Band Emissions

5.1 Standard Applicable

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

5.2 Test Procedure

As the radiation test, set the Lowest and Highest Transmitting Channel, observed the outside band of 902MHz to 928MHz, than mark the higher-level emission for comparing with the FCC rules.

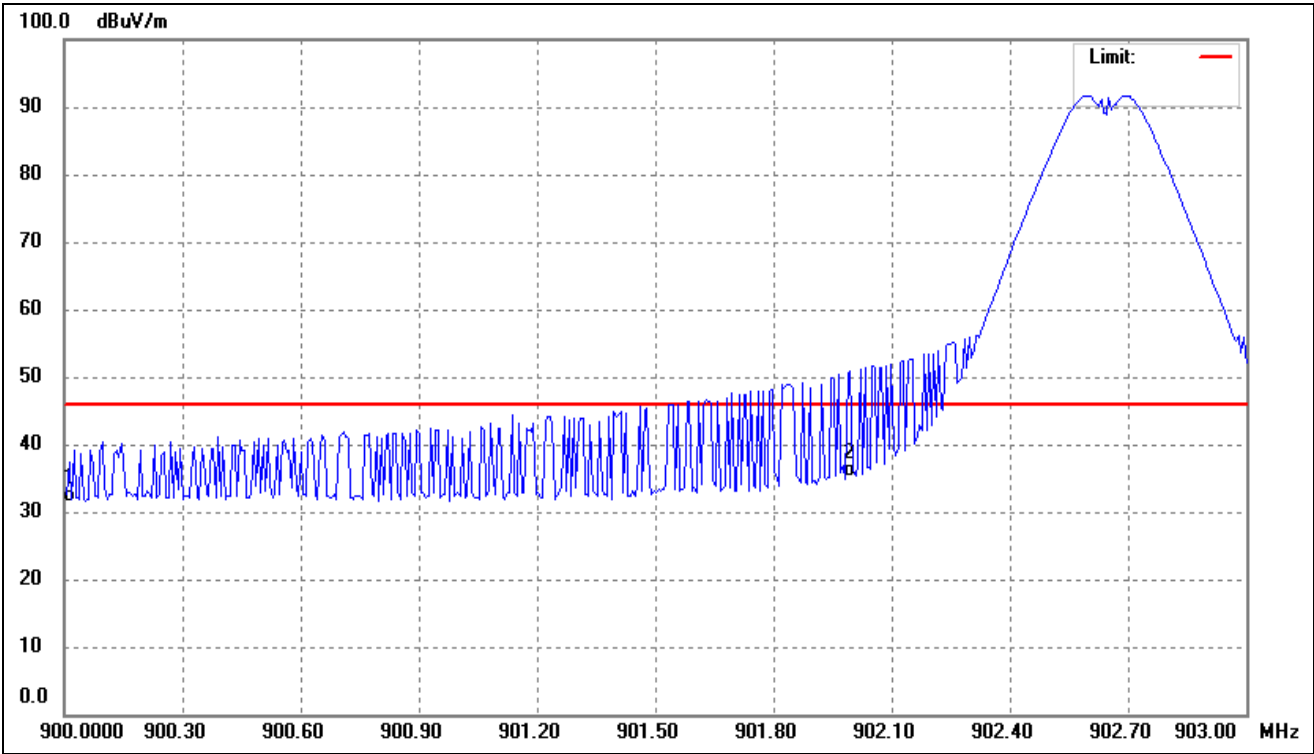
5.3 Summary of Test Results/Plots

Test mode	Frequency	Limit	Result
	MHz	dBuV / dBc	
Lowest	902.00	<46dBuV	Pass
Highest	928.00	<46dBuV	Pass

The edge emissions are below the FCC 15.209 Limits or complies with the 15.249 requirements.

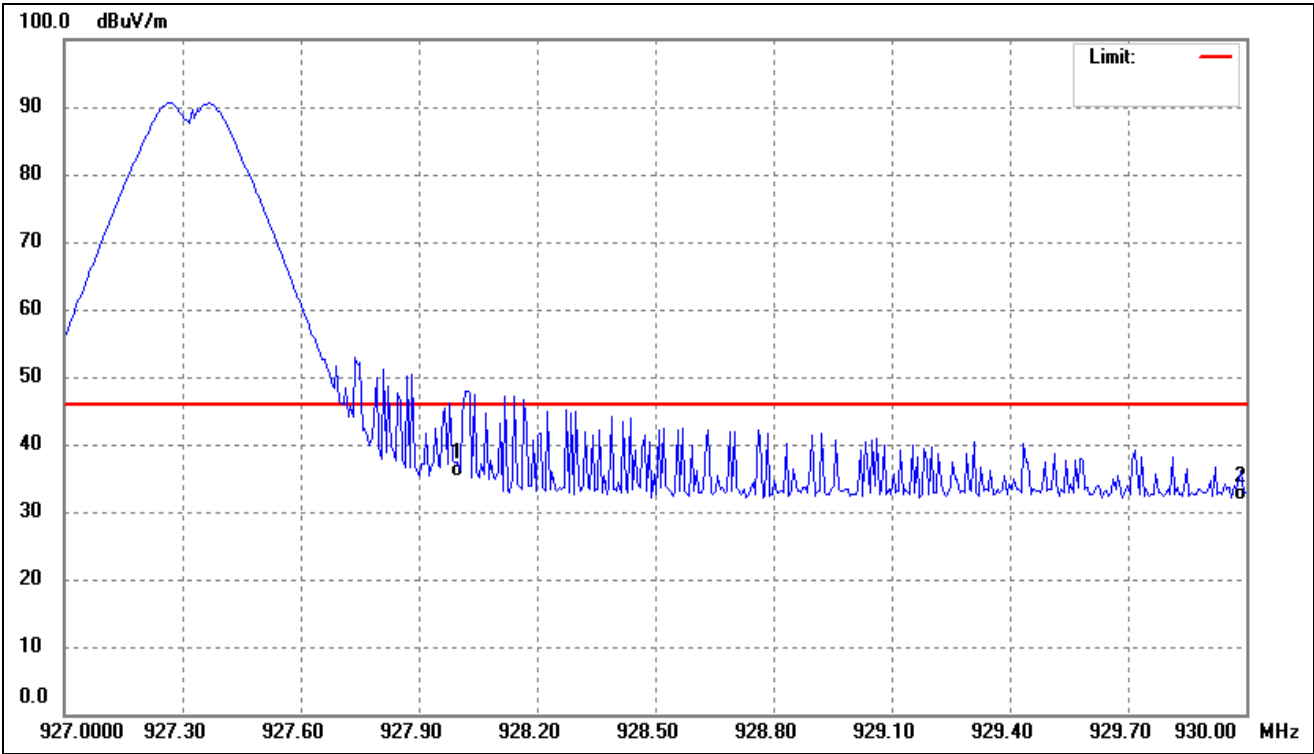
Please refer to the test plots as below.

Test Channel	Low	Polarity:	Horizontal(worst case)
--------------	-----	-----------	------------------------



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	900.0000	30.32	1.96	32.28	46.00	-13.72	Peak Detector
2	902.0000	34.06	1.99	36.05	46.00	-9.95	Fundamental

Test Channel	High	Polarity:	Horizontal(worst case)
--------------	------	-----------	------------------------



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	928.0000	33.60	2.52	36.12	46.00	-9.88	Fundamental
2	930.0000	29.98	2.55	32.53	46.00	-13.47	Peak Detector

6. Emission Bandwidth

6.1 Standard Applicable

According to 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

6.2 Test Procedure

According to the ANSI 63.10-2020, the emission bandwidth test method as follows.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Set span = 1MHz, centered on a transmitting channel

RBW $\geq$ 1% 20dB Bandwidth, VBW $\geq$ RBW

Sweep = auto

Detector function = peak

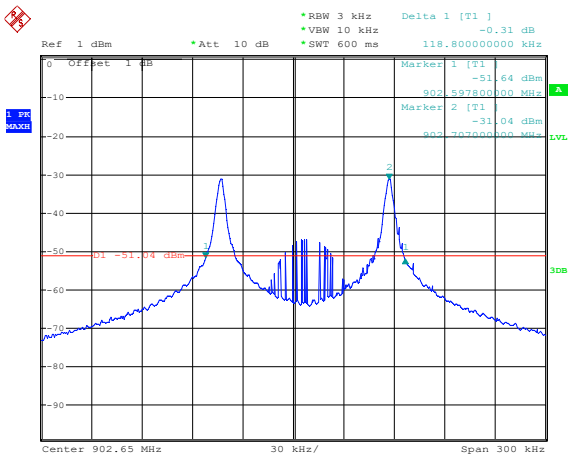
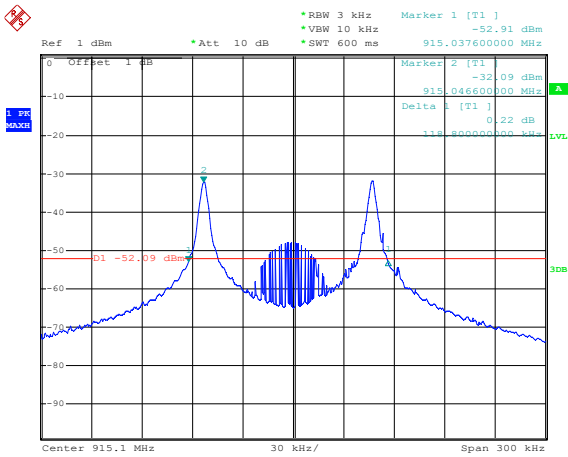
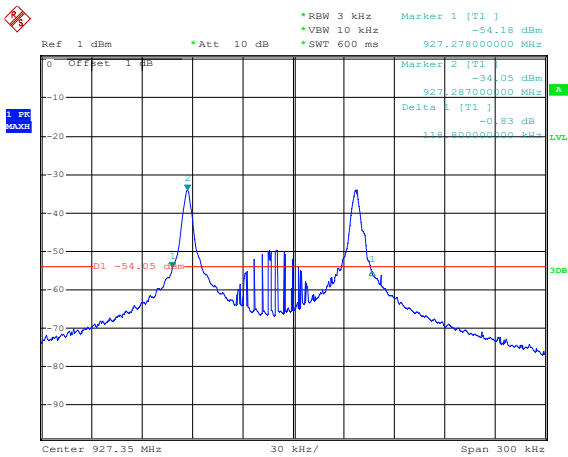
Trace = max hold

All the trace to stabilize, use the marker-to-peak function to set the marker to the peak of the emission, use the marker-delta function to measure and record the 20dB down and 99% bandwidth of the emission.

6.3 Summary of Test Results/Plots

Channel	Frequency MHz	20dB Bandwidth kHz
Low Channel	902.65	118.8
Middle Channel	915.10	118.8
High Channel	927.35	118.8

Please refer to the following test plots:

Low Channel	 Ref 1 dBm *Att 10 dB *RBW 3 kHz *VBW 10 kHz *SWT 600 ms Delta 1 [T1] -0.31 dB Marker 1 [T1] -51.64 dBm 902.597800000 MHz Marker 2 [T1] -31.04 dBm 902.600000000 MHz Center 902.65 MHz 30 kHz/ Span 300 kHz Date: 8.AUG.2025 10:27:06
Middle Channel	 Ref 1 dBm *Att 10 dB *RBW 3 kHz *VBW 10 kHz *SWT 600 ms Marker 1 [T1] -52.91 dBm Marker 2 [T1] -32.09 dBm 915.046600000 MHz Delta 1 [T1] 0.22 dB 915.037600000 MHz Center 915.1 MHz 30 kHz/ Span 300 kHz Date: 8.AUG.2025 10:28:12
High Channel	 Ref 1 dBm *Att 10 dB *RBW 3 kHz *VBW 10 kHz *SWT 600 ms Marker 1 [T1] -54.18 dBm Marker 2 [T1] -34.05 dBm 927.287000000 MHz Delta 1 [T1] -0.83 dB 927.278000000 MHz Center 927.35 MHz 30 kHz/ Span 300 kHz Date: 8.AUG.2025 10:25:26

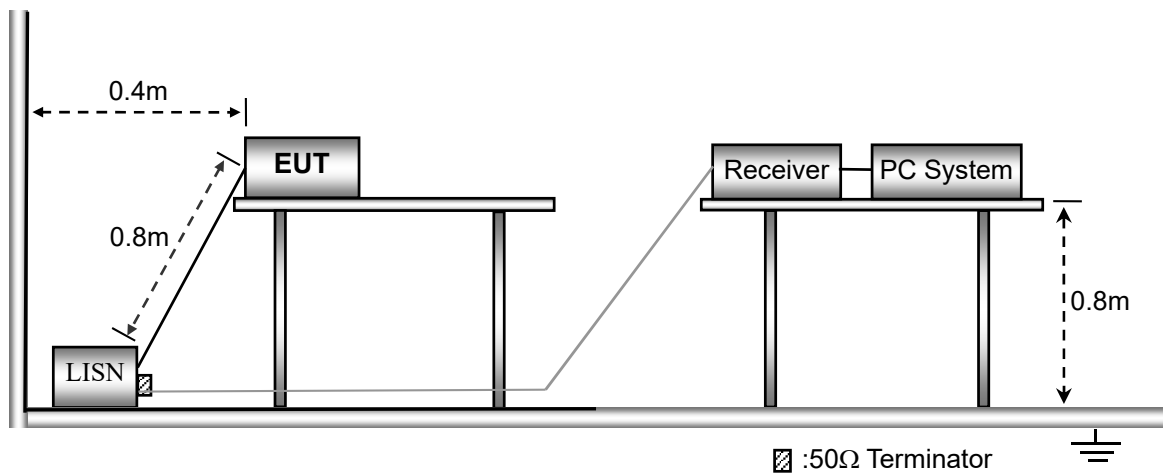
7. Conducted Emissions

7.1 Test Procedure

The setup of EUT is according with per ANSI C63.10-2020 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

7.2 Basic Test Setup Block Diagram



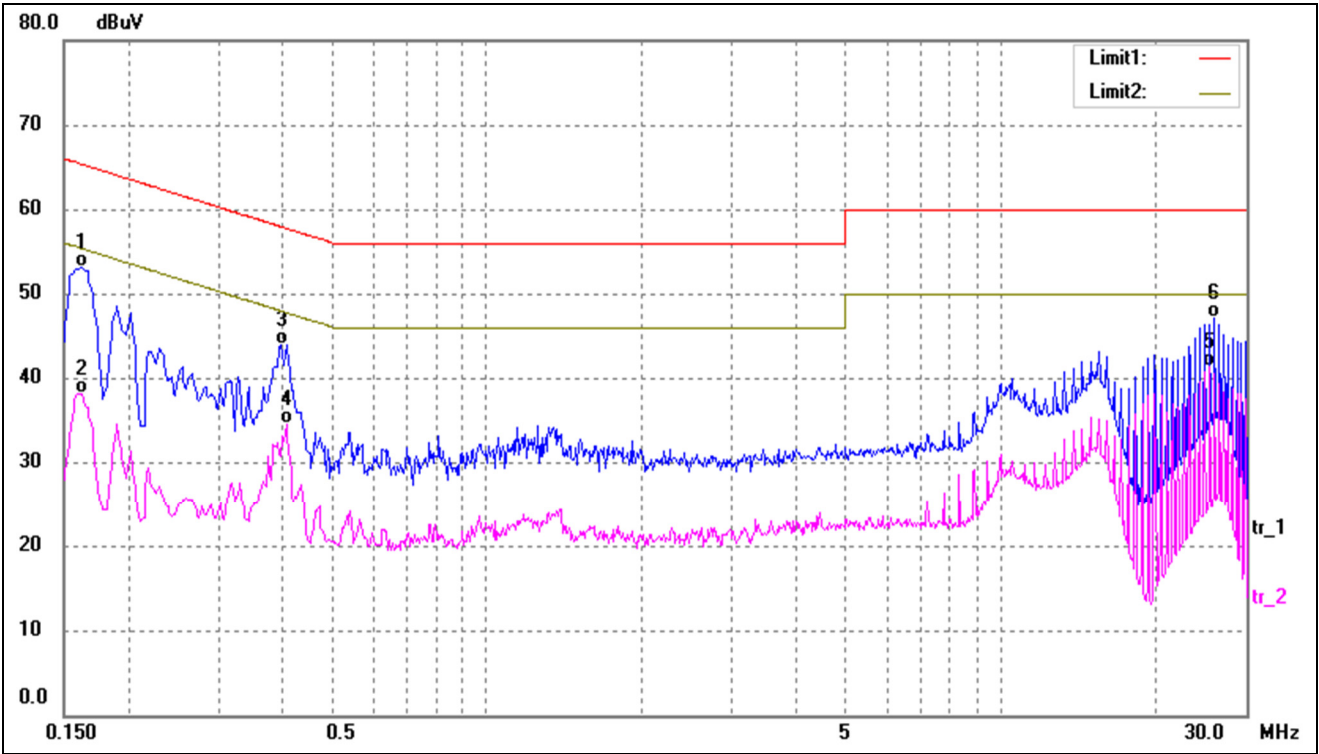
7.3 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency	150kHz
Stop Frequency	30MHz
Sweep Speed	Auto
IF Bandwidth.....	10kHz
Quasi-Peak Adapter Bandwidth	9kHz
Quasi-Peak Adapter Mode	Normal

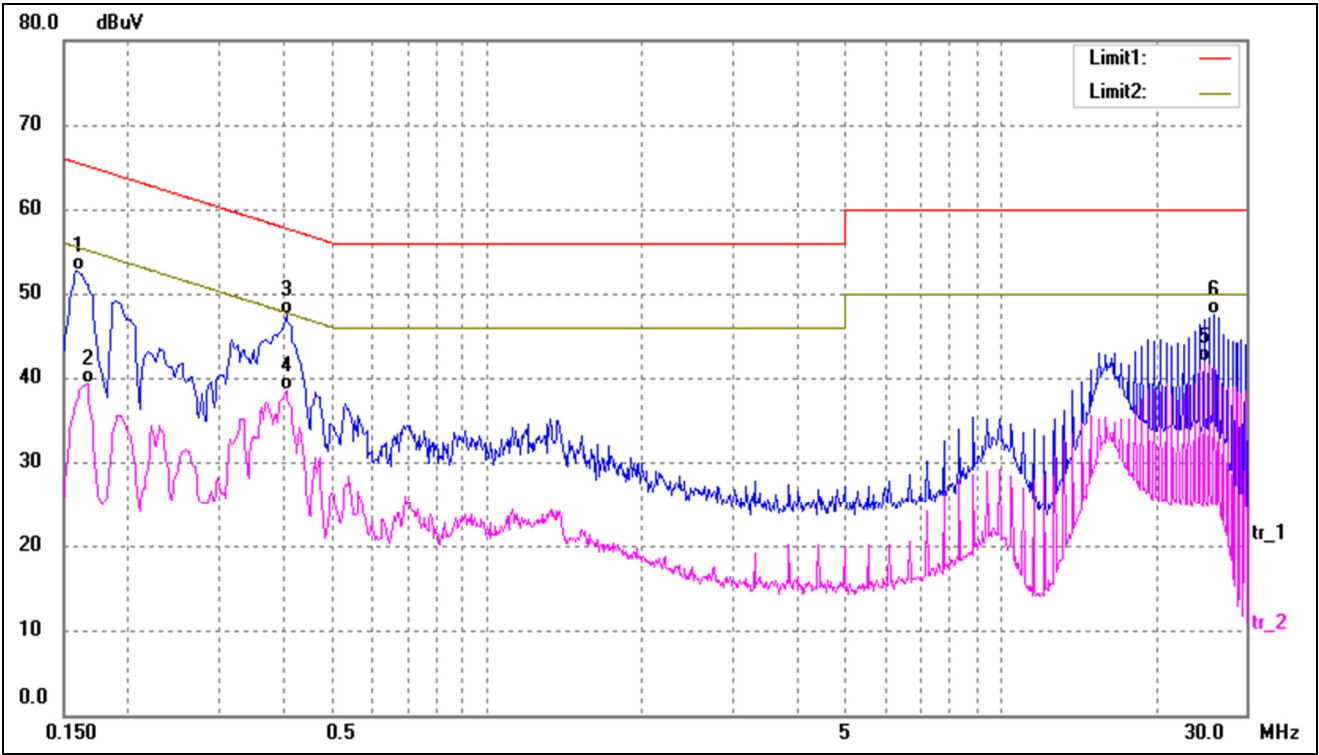
7.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral
-----------	---------------	-------------	-----------	---------



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1620	43.31	9.72	53.03	65.36	-12.33	QP
2	0.1620	28.43	9.72	38.15	55.36	-17.21	AVG
3	0.3940	34.23	9.69	43.92	57.98	-14.06	QP
4	0.4060	24.74	9.69	34.43	47.73	-13.30	AVG
5*	25.4700	31.18	10.07	41.25	50.00	-8.75	AVG
6	26.0260	37.04	10.05	47.09	60.00	-12.91	QP

Test Mode	Communication	AC120V 60Hz	Polarity:	Line
-----------	---------------	-------------	-----------	------



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	43.01	9.73	52.74	65.57	-12.83	QP
2	0.1660	29.57	9.70	39.27	55.16	-15.89	AVG
3	0.4060	37.85	9.69	47.54	57.73	-10.19	QP
4	0.4060	28.80	9.69	38.49	47.73	-9.24	AVG
5*	24.8900	31.75	10.08	41.83	50.00	-8.17	AVG
6	25.9940	37.48	10.05	47.53	60.00	-12.47	QP

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

***** END OF REPORT *****